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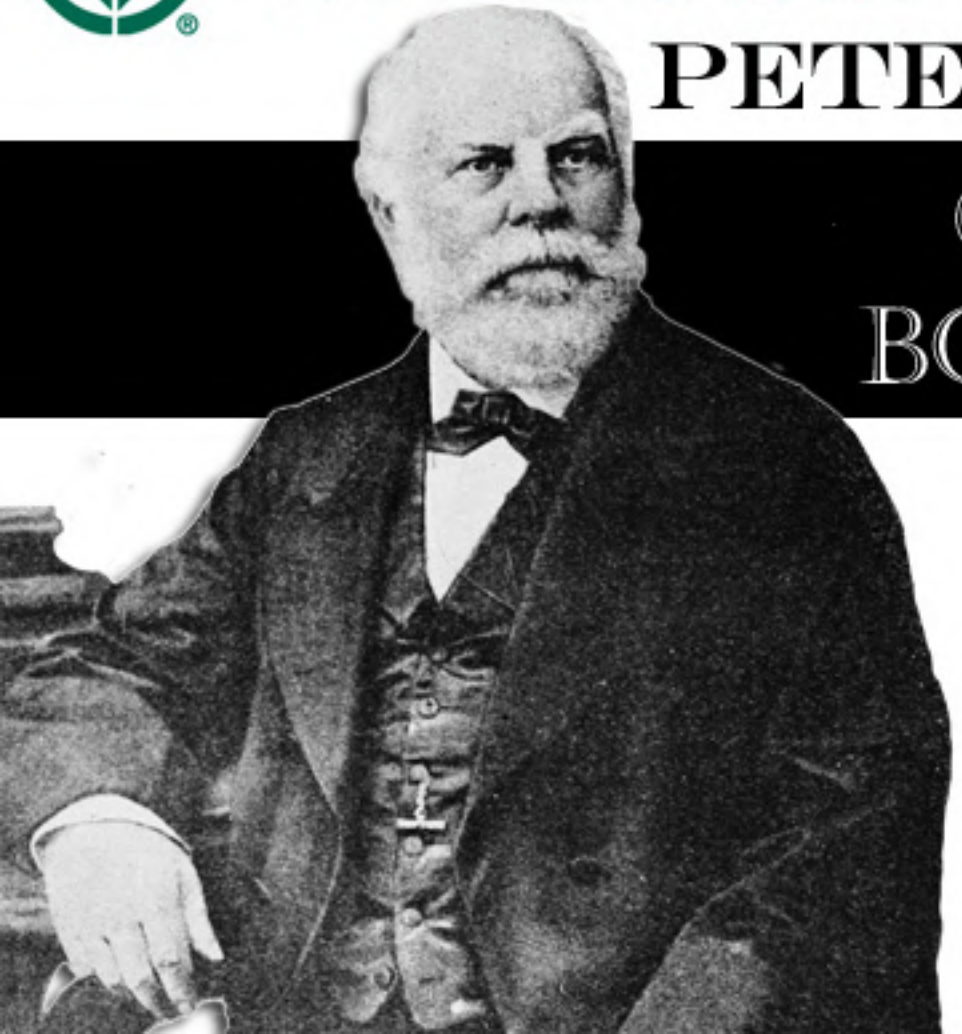

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Cuscuteae for Torrey & Gray's flora

1/

December 1846

Convolvulaceae

Suborder Cuscuteae Chois. conv.

Lobes of corolla imbricate in aestivation; stamens equal in number, and alternating with the divisions of corolla; filaments ~~connected with~~ adhering to the tube of the corolla, rarely naked, generally bearing near their base two wing like appendages, which ~~mostly are connected~~ at their free upper part ~~mostly~~ are ~~connected~~ united into one scale; these scales opposite the filaments, are again frequently connected at the base into one ~~interior corona~~

Lobes of calyx united or rarely distinct

Lobes of corolla imbricate in aestivation; ~~ovary two cell~~ embryo elongated, filiform, without cotyledons, spirally coiled around a fleshy, mucilaginous albumen.

~~Leafy~~ ~~twining~~ Annual Parasitics, with filiform white, yellow or red stems and scale-like leaves, without verdure, twining to the left; germinating in the ground, but soon fastening on those plants (strangers) from which they draw their sustenance by their papillose roots, which penetrate the epidermis (mostly dicotyledonous ones, innocuous or poisonous ~~one~~ as Euphorbia, Rhus Toxicodendron &c, rarely monocotyledonous, never cryptogamous plants — ~~mostly~~ generally herbaceous, but also shrubby, and ~~lignous~~ lignous ones (though it sometimes limbs root the) and then loosing their connection with the soil.

~~Lobes of~~ Calyx persistent, its lobes (united or rarely distinct; corolla campanulate ~~(thorn) at persistent base, around ovary the germ; capsule~~ globular or tubular, hood like with 5 or rarely 4 ~~lobes~~; stamens equal in number and alternating with the lobes of the corolla, filaments adhering to its tube; rarely naked, generally bearing on each side near the base winglike toothed appendages which at their free upper ~~part~~ end are mostly united into one toothed or fringed, scale; ovary two celled, with 4 erect ovules, styles 2, distinct or united; stigmas elongated or capitate, surrounded at base or covered by the bitten corolla with the stamens capsule) 2 celled, ~~4 seed~~ (frequently by abortion less) seeded either opening by circumscission, ~~when the base with part on the whole~~ or not opening at all. in either case the two carpels of the capsule of those, which have two distinct styles

separate to some extent at the top, leaving an ~~fola~~ opening between the styles, which however does not penetrate into the capsule, but only between two lamellae of the dissepiment. — Seeds large, ~~yellowish~~ compressed ~~an~~ irregularly ~~oval~~ oval, with a rough surface, — yellowish or brown.

1. Cuscuta Linn. ~~ex parte~~ partly, Cuscuta ~~and~~ Epilinella Pfeiff.

Styles two, distinct or more or less united; stigmas elongated, acute, either filiform or ~~somewhat conic~~ tapering to the point; upper part of capsule separating from the persistent base & dissepiment by circumscission.

Flowers mostly sessile ~~and~~ glomerate, calyx always free, not bracted. Native ~~plants~~ of the old world, a few species introduced into different parts of America.

1. Cuscuta Epilinum (Weihe): Stem nearly hairlike, flowers sessile in sessile rather distant heads, ~~free~~ 5-parted; ~~ovate~~ segments of calyx ~~ovate~~ broadly ovate acute or abruptly acuminate, nearly including the globose corolla; tube of corolla as long as its ovate acute ~~lobes~~ incurved lobes; stamens half as long as the limb; substaminal ~~scales~~ scales short, ~~rather square~~ broad crenulate at the truncate apex; styles half as long as the incrassate stigmas, both ~~of the~~ together ~~of the length of~~ shorter than the globose ovary. capsule globose, ~~large~~, surrounded by the withering corolla. — Weihe Arch. d. Apoth. 8. p. 51; Reichenb. ic. t. 693 Koch, syn. p. 495. DC prod 9. 452 ~~#~~ — C. densiflora Loy fid. Choisy Cuscuta Epilinella cuscutoides, Pfeiff. Bot. Zeit. 4. p. 20 europaea ~~#~~, Darlingt. fl. cestr 2d ed. p. 167 ~~It grows nearly~~ Parasitic on flax.

Common in flaxfields in central & western Europe, and introduced ~~with~~ (with flaxseed) into the eastern States, (Pennsylvania, Darlington; New York Beck; Massachusetts, Oakes!) ~~In wet seasons this species becomes very destructive to flaxfields~~. The thin, nearly hairlike stem is mostly simple, nearly hairlike, pale, from one to two feet high; flowers ~~white~~, very densely clustered, whitish, small; capsule large in proportion. — In wet seasons this species becomes very destructive to the flax-fields, in which it is abundant.

vol. 43.

2. Lepidanche Engelm. in Sillim Journ. Octob 1842
(with character extended) Cuscuta Linn. and authors partly
Engelmannia Pfeiff. in bot. Zeit. 3. p. 673 (not of Torr. & Gray)

Styles two, distinct or rarely united, frequently supported by a fleshy stylopodium; stigmas capitate; capsule not opening, finally separating entire from the persisting calyx.

Flowers mostly pedicelled, cymosely umbellate or paniculate; calyx free or surrounded by a number of bracts which resemble the sepals. — Natives of America, Polynesia and eastern Asia, only one species is known to be in Europe, undoubtedly introduced.

§. 1. Styles united

1. L. gamostyla: stem very thick, climbing high; glomerules few flowered; flowers 5-parted; sepals free, imbricate, orbicular, nearly including the much smaller cylindrical corolla; lobes of corolla much shorter than tube, obtuse; anthers ovate nearly sessile, subexaminal scales mostly in the shape of two distinct dentated wings on the sides of the adnate filaments; ovary globose; styles united stigma 2-headed; capsule large covered by the withered corolla. — Linth. flor. tex. exsicc. III. pr. ined.

Along the upper Guadaloupe, Cibolo and other streams in western Texas, climbing over the bushes and small trees, 10 to 15 or 20 feet high, August to October. This largest north american species corresponds in a curious way with the largest europeam Cuscuta the C. monogyna; in both the stem is of the size of a middle sized gorse quill; both climb on trees; both have a comparatively small flower, but large fruit; and both are the only ones with one style in their countries. The resemblance may be carried out still further and still by the structure of the capsule and the shape of the stigma both must be referred to distinct genera.

§. 2. Styles distinct

* Depressae: ovary and capsules depressed-globose, without a stylopodium; capsule membranaceous, thin, mostly of a light yellowish colour.

† Withered corolla covering the top of the capsule

2. L. tenuiflora: stem threadlike; flowers mostly 4-parted, with short pedicells,

5375

forming dense cymes; tube of the corolla cylindric, twice the length of its the obtuse erect or spreading lobes, and of the ovate obtuse segments of the calyx; stamens shorter than the limb; scales ovate, laciniate, shorter than the tube; styles as long as the (depressed) ovary (; capsule covered by the remains of the corolla). — Cuscuta Cephalanthi Engelm in Sillim. Journ. 43 pag. 336. t. 6 f. 1–6.

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GEORGE ENGELMANN PAPERS

On the margin of ponds and swamps near St Louis, Mo! also Beardstown Ill, Mr Geyer! mostly on herbaceous plants, principally Compositae, Vernonia, Aster, Eupatorium, but also on many others, which come within its reach, as Polygonum, Lysimachia, Lycopus, Saururus, etc; rarely on shrubby plants, as Cephalanthus or Salix, Cornus. July to October. — This species which is common about St Louis is easily distinguished by its small flowers (which are mostly 4- (rarely 3 or 5-parted) and the hoodlike remains of the corolla on the capsule; the cylindrical tube of the corolla becomes convolute as soon as the ovary enlarges, and finally tears loose from its base. — I have first described this species first under the name of Cuscuta Cephalanthi, under the mistaken idea that most of the Cuscutae adhere principally to one species or genus of plants, and only accidentally stray on others; but though this may be true as to some species to some extent, yet it generally is not so; most of them grow promiscuously on all the plants in their neighborhood, and however different in their structure, or their properties. In this especial case, I have found that Lepid. teneriflorum grows more rarely on Cephalanthus, than on most other plants already named — I have therefore found myself obliged to change all these names, derived from the plants on which these parasitics vegetate.

3. L. cuspidata (Engelm. Cuscuta): stem threadlike, much branched; flowers 5 parted, pedunculate, forming loose bracteose cymes; sepals free, ovate (the exterior cuspidate), imbricate, surrounded by similar bracts; tube of the corolla cylindric or funnelshaped, longer than the calyx, and its ovate or lanceolate-ovate acutish erect or spreading lobes, and than the calyx; stamens shorter than the limb; scales ovate, fimbriate, converging nearly reaching to the opening throat of the corolla, connected with one another at base; styles filiform, several times longer than the globose ovary; globose capsule covered by the remains of the corolla. — Cuscuta

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2. Cuscuta for Flora

cuspidata Engelm. in Boston Journ. N. Hist. V p — Plantæ Lindheimer ~~p. 125~~

α. pretensis: flowers smaller, fewer bracts around the calyx, tube of corolla more cylindric and not so large in proportion; stamens only half as long as the ovate acutish lobes of the corolla. styles two or ~~3 or 4 times~~ as long as the ovary — Linth. Pl. Tex. exsicc. — I, 125

β. humida: flowers larger, of thinner texture, surrounded with many bracts; tube of corolla somewhat funnelshaped, larger in proportion; stamens somewhat shorter than the lanceolate acute lobes of the corolla; styles 3 or 4 times as long as the ovary. — Linth. Pl. Tex. exsicc. Plantæ Lindheimer II, 277.

Texas, from the Brazos to the Colorado, F. Lindheimer! Var α' in dry prairies west of the Brazos, in June & July, growing on Tephrosia, Bradburia, Ambrosia, Liatris etc. var β. in rich, moist bottom lands on the Colorado, in August, growing on Iva, Ambrosia, Rudbeckia. — ~~Inflorescens loose~~ Pedicells with numerous cuspidate bracts, the uppermost surrounding the calyx like an involucrum, similar in shape but smaller than the sepals; sepals somewhat lacerate or crenulate ovate, carinate (carina less distinct in β.) cuspidate interior ones ~~cuspidate~~, rather obtuse, all concave, loosely imbricated; lobes of corolla thin, membraneous, with a strong (in β. a less distinct) middle nerve, formed by large oblong or linear cells; when dry convolute; at the base the lobes are dilated and cover one another more than in any other N. am. species. Styles are remarkably slender and long, ovary very small in proportion, but soon after flowering ~~swelling~~ enlarging, and giving the corolla an urceolate shape.

†† withered corolla remaining at the base of the capsule

4 C. arvensis (Beyrich in herb Berlin under ~~sub~~ Cuscuta): stem filiform branched, flowers ~~pedicelled~~ (small) 5-parted, pedicelled, in loose often somewhat umbellate cymes; ~~calyx deeply 5 parted~~ ~~shorter~~ campanulate tube of the corolla, ~~smaller~~ ~~not~~ included in or exceeding the deeply 5 parted calyx, and shorter than the lanceolate acuminate spreading or ~~reflexed~~ lobes of the limb; stamens much shorter than the limb; scales ovate, fimbriate converging ~~closing the tube~~, ~~and~~ often exceeding ~~at~~ the tube; styles as long ~~as~~ or much longer than the globose depressed ovary; capsule globose surrounded at base by the remains of the corolla. —

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more open α. laevis: calyx thin, membranaceous, either much wider than the tube of the corolla and then 5-angled at the commissures of the sepals, or ~~not so wide~~ closely appressed and then less distinctly angled, mostly longer, sometimes also shorter than the tube of the corolla ~~open~~, ~~rather open~~. — Cuscuta pentagona Engelm! Ill. in Sonn 43, l.c. t.6 fig 22-24 p. 340 & 45 p. 76

C. arvensis Beyrich! in herb. reg. Berol. C. globularis Nutt! in herb. Acad. Phila.

β. verrucosa: calyx thick, verrucose, mostly much shorter than the deeply campanulate somewhat globose tube of the corolla. — Cuscuta verrucosa Engelm! Ill. Sonn 45, p. 74. l.c. t.6 fig 25 a-e. Lindl. fl. tex exsicc. Lindh. I, 127 & III —

Virginia Rugel! N. Carolina Curtis! S. Carolina Beyrich! Bosc! Florida Rugel! var. α, with a broad angular calyx; in fields, pastures, dry places, growing on many Compositae (Aster, Erigeron, Chrysopsis, Pterocaulon, Ambrosia etc, also on Dimiflora, Polygonum, frequently on Trifolium etc. A form with small calyx (C. pentagona β. microcalyx Engelm l.c. ~~Ill. for~~ ~~typ~~ in Illinois, Geyer! on ~~sandy~~ dry hillsides on Aster, Solidago, Artemisia, Malva, Euphorbia etc. A form with large but not angular calyx, and narrower lobes (C. pent. γ. calycina Engelm l.c.) in Texas, Lindheimer! on Solidago, Boltonia etc.

Var. β. In Texas Drummond! Lindheimer! from Houston to San Antonio, mostly on Petalostemon, but also on Tephrosia, Galega, Dalea, Hedyotis, Chrysopsis, Solidago, Coreopsis, Brazoria, Tragia, and even on Cornus. May to July. — This is the smallest flowered of our ~~native~~ species and the earliest one; the shape and texture of the calyx are so different in the different forms of this plant that I ~~had~~ distinguished two species ~~till the specimens~~ collected by Mr Lindheimer near San Antonio variable in their calyx and some of the intermediate ~~in their~~ between the extreme forms, proved them to belong to one species; In all of them the calyx segments are obtusish to rounded, and the ~~segments~~ lobes of the corolla acute to long acuminate, ~~with~~ spreading or reflexed, but the tips incurved; scales large, much fringed, ~~covering~~ including the small ovary; styles mostly as long as the ovary, but in the form from San Antonio, they are longer.

5. L. umbellata (Humb. Bonpl. & Kunth? Torrey under ~~sub~~ Cuscuta): stem hairy like; fascicles of flowers 5-parted, long pedunculate, forming few-flowered umbelliform fascicles; segments of

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the calyx ovate - lanceolate, acute, longer than the campanulate tube of the corolla; lobes ~~of the~~ lanceolate, acute, twice as long as the tube, erect or spreading; stamens nearly as long as the limb; filaments ~~broad at base~~, subulate; ~~anthers linear oblong~~ scales ovate, fimbriate extending to the throat of the corolla; ~~filiform~~ capillary styles about as long as the ovary. — Torrey in Ann Lyc. N.Y. 2, p. 223. Longs Exped. II. p. 86. Humb. B. & K. n. gen. et sp. 3. p. 121. - DC. prodr. 9. p. 460

Barren regions of the upper Canadian river, at the base of the Rocky mountains almost exclusively on Portulaca oleracea, Dr James! — Humboldt's plant has been collected between Guanajuato & Salamanca, on the plateau of Mexico, also on low prostrate plants, and the description so far as it goes appears to prove the identity of Humboldt's & Torrey's plant, but it was not possible to compare specimens, — in ~~the~~ mexican plant however the lobes of the corolla are reflexed, (in ours ~~in ours~~ erect or slightly spreading) and filaments linear, (in ours distinctly subulate ~~for a broad base~~ for a broad base). — This species is intermediate between L. aquensis & L. chlorocarpa but distinguished by the low growth the ~~finer~~, hair like stems, the long pedicels, flowers much smaller than in L. chlorocarpa, ~~segments~~ lobes of calyx & corolla more elongated; styles ~~thinner than~~ ~~thinner~~ slenderer, scales less deeply ~~lobed~~ lobed, stamens shorter, anthers more elongated. The texture of all parts of the flower is very fine.

6. L. chlorocarpa: stem thread like; flowers mostly 4-parted, ~~forming~~ on short pedicells, ~~on~~ subsessile ~~nearly~~ glomerate; tube of the corolla campanulate shallow nearly equal to its acute, spreading lobes, and the acutish triangular segments of the calyx; stamens as long as the limb; scales (small) mostly bifid, incised, appressed; styles thick, as long as the depressed ovary; ~~remains of~~ with the red corolla persistent at base of the depressed - globose capsule. — Cavanilles Polygonum Engelm! Ill. c. t. 6 fig. 26-29.

Wet places, margin of ponds etc St Louis Mo, Drummond! Lindheimer! Engelmann! — Along ~~In~~ the upper Illinois rivers Engelm! Mostly on Polygonum sp. but also on Penthorum, ~~Lepto~~ Aster, Ambrosia, Rudens, Lycopus, Acalypha; ~~also~~ rarely ~~on~~ Gramineae and on Cephalanthus.

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August to September. — Closely related to the two last ones; flowers much larger, more open, with shorter pedicels, segments of corolla shorter, of the same length as the stamens, filaments subulate & scales smaller, ovary larger, protruding out of the shallow tube of the corolla. Stems orange coloured, flowers greenish white thin & membranaceous. —

MISSOURI BOTANICAL GARDEN
under GEORGE ENGELMANN PAPERS

5376

7. L. californica (Choisy sub Cuscuta): stem hairlike, much branched; flowers 5-parted, pedicelled, umbellate in loose few-flowered fasciles; tube of the corolla campanulate, very short, much shorter than the ovate lanceolate, acuminate, reflexed at the apex segments of the calyx; lobes of the corolla linear-lanceolate, acuminate, erect or slightly spreading, 3 or 4 times as long as the tube; stamens much shorter than the limb; anthers linear, equal to the filiform filaments; scales? styles setaceous, 3 or four times as long as the globose ovary.

Upper California, Douglas, Ste Barbara Nuttall! on Eriogonum. — Choisy, California Choisy Cuscuta p. 183 DC. prod 9, p. 457; Hook bot Beech suppl. p. 364. C. acuminata, Nuttall! in herb Acad Philad.

Upper California Douglas Ste Barbara, Nuttall! on Eriogonum. — A very distinct species, with its few-flowered and its thin, elongated flowers, even the flowerbuds present the characteristic appearance both of the long pointed corolla, and the reflexed points of the calyx. Calyx & corolla membranaceous very thin, when dry scarious and semi-transparent; scales have not been able to discover in the few imperfect flowers examined; styles very thin & slender, stigmas small, globose. — I have little doubt that the plant of Douglas, described by Choisy, being the same as that of Nuttall described here; but he says that the tube though he but he mentions the styles as short and the stamens as hardly included, hardly reaching over the throat of the tubular corolla.

** Umbonatae: ~~ovary & stipitate crowned with with a stylopodium~~, ovary ~~with a stylopodium~~, upper part of the ovary tumid, forming a fleshy stylopodium, ~~which supports which~~ sometimes considerably elongated; capsule more or less umbonate or rostrate, of a firmer texture and mostly brown colour.

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3. Cuscut. for Flora

† flowers pedicelled bracts few and distant, corolla mostly remaining at the base of the capsule.

8. L. Gronovii (Willd ~~in Rot. Sch. 6 p. 205~~ ; stem threadlike; flowers ~~mostly~~ 5-parted, (~~pedicelled~~) on shorter or longer pedunkles, forming small glomerules, or smaller or larger, denser or looser panicles; tube of the corolla deeply campanulate, longer than the pellucid-punctate, (spreading (finally reflexed) lobes and the broadly oval) ~~somewhat~~ carinate and ~~slight~~ finely crenulate ~~lobe~~ segments of the calyx; stamens as long or a little shorter than the lobes; scales fimbriate, convergent, mostly united at base; ~~mostly~~ styles ~~slender~~ as long or longer than the ovary; ~~capsule~~ corolla ~~remaining~~ withering mostly at base of the imbonate capsule. —

Cuscuta sulcata etc Gron. Virg. 18 (for wilded) C. americana Linn. and most fl. americ. partly

v Cuscuta Gronovii Willd in R. & Sch. 6. p. 205. ~~Chois. Cusc. p. 185 t. 4 f. 3. DC. prod. 9 p. 459.~~ C. vulgivaga Engelm. l. c. p. 338 t. 6. f. 12-16

~~α. laxiflora: flowers larger, in loose, very much branched cymose panicles.~~

α. parviflora: flowers smaller, mostly on shorter pedicells forming umbells or even glomerules; ~~C. Gronovii~~ ~~withering~~ corolla always at base of capsule. — ~~Cuscuta~~ C. Gronovii Herb Willd! n. 3160! Chois. Cusc. p. 185. t. 4. f. 3. DC. prod. 9. p. 459

C. sanamosa Nutt! hb. Acad. Phil. β. laxiflora: pedicells longer flowers larger in loose very much branched cymose panicles; withering corolla at base of capsule.

γ. calyptrata: pedicells more bracted, flowers larger, bracted, corolla deeply campanulate approaching to cylindrical ~~subcylindrical~~, tubulose; ~~styles very slender~~ scales oblong linear, slightly laceratе; ovary with a larger stylopodium, styles ~~very slender~~ capillary, much longer; capsule oval, umbonate, surrounded, and often even covered by the withered corolla.

δ. tetrameris: flowers in compound umbelliform cymes, 3-4-parted.

Throughout the United States, var α in the eastern states from Vermont! & New hampshire! to Georgia! β. mostly west of the Alleghanies, western New York! to Wisconsin! Missouri! Kentucky! & Alabama! also in Pennsylvania! & N Carolina! γ in Texas! δ in Connecticut! On very different plants, dicotyledoneous and monocotyledoneous, innocuous and poisonous, herbaceous and shrubby; especially on many Compositae, I have seen it on Vernonia Eupatorium Aster, Solidago, Bidens, on Polygonum, Desmodium, on Urtica & Boehmeria, on

Rhus toxicodendron, Cephalanthus, Sambucus, Cornus, Ribes, Laurus, Bignonia, Caprifolium, Rubus, Salix etc. ~~etc~~ August to October —

This ~~most~~ variable species may always be recognized by the characters given; the calyx is always shorter than the (deeply campanulate) tube of the corolla, its segments always broadly ovate, obtuse (inbricate), and all or at least the outer ones carinate by a number of warts or glandular protuberances; the lobes of the corolla are mostly only half as long as the tube, sometimes of the same length, broadly ovate obtuse; styles always slender, ~~sometimes~~ mostly longer than the ovary; capsule, globose, umbonate or somewhat ~~soft~~ conic. The northeastern form is ~~mostly~~ small flowered with very short pedicells, and appears to be a small, low plant; the southeastern has rather longer pedicells (Willdenow's specimen for example, which does ~~not~~ well agree with ~~Chaisy~~, his short diagnosis: floribus paniculatis ~~corymbosis~~, but not at all with Chaisy's l. c.: floribus artissime glomeratis); the western plant (often creeps over ~~high~~ bushes, 5 to 8 feet high; is larger, with thicker stems, and large loose decompound, rarely more dense panicles) stem reddish orange, flowers white.

9. L. patens: stem threadlike; flowers 5-parted, pedunculate, crowded in dense umbelliform or paniculate cymes; tube of the corolla ~~with~~ campanulate, wide and shallow, equal in length to the (oblong or) linear oblong obtuse spreading lobes, and ~~mostly~~ a little longer than or equal to the ~~ovate~~ oblong obtuse (entire & smooth) segments ~~lobes~~ of the calyx; stamens generally as long as the limb; filaments subulate; scales large, pinnatifid laciniate, convergent, mostly exceeding the tube; styles thick, as long as the ovary; withered corolla persistent at the base of the globose, ~~very~~ slightly umbonate capsule. — Cuscuta Saunii, Engelm. l. c. p. 339 t. 6. f. 17–21 (p. 18. bud) and 45 p. 74

β? glandulosa: flowers on short pedicels (glandular) in glomerules; shallow open tube of the ~~corolla glandulous~~ corolla about the same length as the very glandulous calyx, and rather shorter than lobes of the corolla; stamens ~~rather~~ a little shorter than the spreading lobes; scales very large; styles thick as long as the glandulous ovary; capsule very glandulous, depressed.

On the margin of ponds & swamps Missouri! Illinois! to Kentucky, (Short!) and western New York (A. Gray!) mostly on

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Polygona, but also on Aster, Vernonia, Eupatorium, Pontiac, ~~Antennaria~~ etc also on Cephalanthus, Salix, and Alnus. Septemb. to Octob.

β? on Polygonum, ~~ff~~ Florida, Ruegel! to Louisiana, Tainturier!

— Very near C. Gronovii, stem also yellow or orange-coloured, fully as thick but never climbing high, always distinguished by the very open flower, which is mostly smaller than at least the western form of C. Gronovii, but bears a larger, more depressed, less umbonate capsule; and by the ~~oblong~~ longer but narrower lobes of calyx and corolla; ~~which latter are not carinate,~~ the segments of the calyx are not carinate nor crenulate, and the corolla is rarely and only slightly dotted. — Var β. on the contrary is glandular ~~all~~ in most part of the flower, or capsule, and moreover so far as I could ascertain in the dried specimens before me, without any stylopodium on the ovary or elevation on the capsule; ~~Note~~ this however is not membranaceous as in ~~the all~~ our species without a stylopodium, but coriaceous; it may prove to be a distinct species. Specimens, sent from N. Carolina? by Mr. Curtis & distinguished by much smaller mostly 4-parted flowers, may belong to a small variety of C. patula.

10. C. rostrata (Shuttleworth under Cuscuta): Stem threadlike, thick; flowers (large) 5-parted, pedunculate, in umbellate cymes; tube of the corolla globose-campanulate, twice as long as the ovate obtuse slightly crenulate segments of the calyx and the spreading (finally reflexed) ovate obtuse lobes of the corolla; stamens nearly as long as the limb, scales fimbriate, united at base; styles filiform, ~~slender~~, ~~of~~ about the ~~same~~ length of the ovary, with its equally long stylopodium; without corolla persistent at the base of the (very large) rostrate capsule. — Cuscuta rostrata. Shuttleworth in Ruegel's coll. Engelm. in Boston Jour. N. Hist. 5 p.

Shady moist places. In the valleys and on the declivities of the Alleghany Mountains from Virginia to South Carolina, Ruegel! Buckley! Gray & Sullivant! Curtis! on Aster, Solidago, Rudbeckia, Eupatorium, Silphium, also on Urtica & Rubus. August to October. — Calyx & Corolla of the same shape and proportions, as in C. Gronovii, but ~~larger~~, ~~mostly larger~~ Corolla destitute of the large circells with give the corolla of that species a pellucid dotted appearance; tissue of the corolla consisting of regular somewhat elongated, hexangular

cells, not of linear elongated ones; ~~ovary remarkably~~ remarkably prominently through the very pointed ovary as well as capsule

it is nearly as long as the ovary proper, though only half as thick ~~and not~~ the stylopodium being more developed than in any other of our species; flowers very different in size, some are not larger than the larger forms of L. Gronovii, while others are full twice as large, to the length of 3 lines; capsule very large, fully 3 lines long, globose, attenuated to a bifid point.

11 L. crenulata (omnivens): Stem threadlike; flowers mostly 4-~~parted~~ (more rarely 5-) parted, pedunculate, in umbellate cymes; tube of corolla cylindrical, ~~equal in length to~~ as long or a little longer than the ovate, acute crenulate, erect, at the apex ~~inflexed~~ flexed lobes, and the ovate acute carinate segments of the calyx; stamens ~~a little~~ somewhat ~~rather~~ shorter than the limb; scales consisting of ~~a few~~ ~~with~~ a few teeth ~~at both sides of the adnate~~ part ~~of the filament~~; styles slender as long or a little longer than the ovary with the very distinct stylopodium; capsule depressed, slightly umbonate, surrounded by or ~~sometimes~~ covered with the remains of the corolla. — Cuscuta Coryli, Engelm! l. c. 43 p. 337. t. 6. f. 7–11. C. umbrosa, Beyrich! in herb Berlin, Hooker? in fl. Bor. am. 2. p. 77

C. ~~parviflora~~ Nutt. in herb Acad Phil.

Western Virginia, Gray & Sullivant! to Georgia Beyrich! and Missouri! & Illinois! about St Louis mostly on Corylus, or on such fertile, but mostly moist places, where ~~the~~ hazels had been growing; even on young hickories, also on Salix, on ~~Rhagotis~~ wood; also on (Eupatorium, Aster) Solidago, Tenia Desmodium, etc; in Virginia on Ceanothus & Helianthus, August to October. — This together with the next species is distinguished by the ~~remark~~ structure of the corolla from all others in our flora; it is fleshy, not membraneous, with ~~an~~ somewhat uneven surface and an irregularly crenulate margin, showing under a glass ~~similar~~ numberless nearly globular semi-transparent cells. ~~A~~ Subfilamentous scales smaller than in any other N. american species, sometimes even wanting, mostly consisting of one or two teeth ~~on~~ each side of the adnate part of the filament. ~~The~~ Stem pale, flowers whitish small, capsule large, brown. Flowers in the

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4 Cusc. for Flora

Georgia and in some of the Virginia specimens as well as in most Missouri specimens 4 parted, in ~~some~~ other specimens from Virginia and a few from Missouri & Illinois ~~they are~~ ~~usually~~ 5 parted. Bayrich's specimen of his C. umbrosa in the Berlin herbarium has 4 parted ~~flowers~~ pod on short pedicels, with cylindric corolla, very indistinct scales etc; — but his description in Hook l. c. leaves it very doubtful wether he could have had the same plant in view, as he there speaks of 5 parted campanulate sessile flowers, fimbriate scales etc.

12 C. porphyrostigma: Stem threadlike; flowers 5-parted, on shorter or longer, often very long pedunkles, forming forming umbellate or paniculate, often very loose and few flowered cymes; tube of the corolla campanulate or turbinate-campanulate, as long or longer than the ovate or ovate lanceolate acute more or less acuminate ~~segment~~ of the calyx, equal in length to or somewhat shorter than the ovate more or less acuminate, irenulate ~~often~~ ~~often~~ one-nerved spreading at the apex incurved lobes of the corolla; stamens ~~equal to~~ or shorter than the limb; filaments subulate; scales ovate lanceolate fimbriate, convergent, nearly equalling the tube; ~~ovary~~ with a very distinct stylopod, ~~nearly equal in length to or shorter than the~~ nearly equalling the styles.

α. hispidula: ~~flowers small, long peduncles~~ cymes loose few flowered, somewhat hispid, or nearly smooth; flowers on very long peduncles, small, segments of calyx shorter and long acuminate lobes of corolla longer than the tube. — Cuscuta hispidula, Engelm! l. c. 45, p. 75. — Linth. flor. tex. exsicc. III —

β. neuropetala: cymes ~~umbellifom~~ paniculate, ~~often~~ more compact, many flowered smooth, flowers larger, ~~segments of calyx~~ the calyx and the lobes of corolla short acuminate 1-nerved equal to the tube. Cuscuta neuropetala, Engelm! l. c. 45. p. 75 Linth. fl. tex. exsicc. I. 123

γ. littoralis: cymes somewhat ~~umbellifom~~ ~~rather paniculate~~, flowers smooth flowers very large, ~~tube of the corolla wide & shallow~~, ~~about equal in length~~ segments of calyx broadly oval, ~~subacute~~ acutish, hardly acuminate, lobes of corolla also ~~ovat~~, broad, abruptly acuminate, rarely 1-nerved, both about equall in length to the wide & shallow tube of the corolla. — Cusc. neuropetala γ. littoralis, Engelm in Boston Jour. N. Hist 5 p

Wet prairies

Southern Illinois! Engelm. Florida, Ruegel! Upthegrove & Kupp

Fremont! 2d Exped nro. 485 and common in Texas, Lindheimer! (β);

~~Var. β. the more common form in all these~~ found on

Compositae, Solidago, Helianthus, Rudbeckia, Liatris, also

Euphorbia Petalostemon

on Eysenhardtia, Myrica, and others; July to Septemb. Var. α.

on dry soil

in Texas from Houston to San Antonio Lindheimer! on

on Solidago, Ambrosia, Gaillardia, Coreopsis, Mimosa, Eysenhardtia, Acacia, Gaura, Dianthus,

also on Commelyna; April and May. Var. γ. ~~Galveston~~ beach

of Galveston island, Texas Lindheimer! on Lyci- rawlsia

Borrichia, Iva, Salicornia; May. — ~~A well distinguished but~~

A very variable plant, but always easily recognized by the

above characters and the structure of the corolla, which entirely

resembles that of L. crenulata; anthers yellow as in all others,

or purple, stigmas always purple, deep brown when dry.

In the smaller, loosely flowered form, α. we ~~frequently~~ frequently observe

a sort of pubescence of pellucid, vesicular hairs on the

pedicells and often also on the calyx, the only instance of this

in any ~~N. American~~ species. —

†† flowers sessile, surrounded by ~~[illegible]~~ imbricate

bracts, which in all respects resemble the distinct sepals; corolla

remaining on top of the capsule. Lepidanche Engel (Lill. Jo.)

13. L. compacta (Juss. mss. Choisy): stem threadlike, thick;

flowers 5-parted, closely sessile densely glomerate; ~~glomerules~~

~~mostly often forming~~ sepals membraneous ovate or orbicular obtuse,

crenulate, concave, closely appressed, imbricate surrounded by

2 to 5 similar but larger bracts; tube of the corolla

cylindric more or less exsert, twice as long as the oblong

obtuse spreading lobes; stamens shorter than the limb; scales

bicuspidate — pinnatifid, convergent (united at base); ovary with a distinct

stylopodium equalling the styles; capsule globose, acutish,

~~mostly~~ 1 to 4-seeded. — Cuscuta compacta Juss. mss. in

Choisy in Cusc. p. 185. t. 4 f. 2. DC. prod. 9. p. 458.

~~α. coronata~~: Cuscuta americana ~~Mich. Fl. am. sept. 1. p.~~

~~et~~ auct. fl. am. partly.

α. coronata: glomerules closer, more compact, often

in one long, thick, ropelike wreath coil; flowers smaller

tube of the corolla slender, only half included in the

calyx; capsule nearly globose, appearing long pointed by

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the remains of ~~the~~ (hood like) of the corolla. — Cuscuta coronata, Beyrich! in herb Berlin, C. compacta Choisy l.c. in part & Engelm.! in Boston Journ N. Hist 5. p.

β. adpressa: glomerules fewer flowered, not so close; flowers larger, tube of the corolla wider & shorter, ~~scarcely~~ nearly entirely included in the calyx; capsule acute appearing less pointed. — ~~Cuscuta~~ Lepidanche adpressa Engelm! Sill. Journ 45. p. 77.

Mostly on ligneous plants (in the mountains) from North Carolina, Gray & Sullivant! Curtis! to Georgia, Beyrich! and Alabama & Gates! On Corylus rostrata, Andromeda axillaris? Prinos glaber (α); β, near Philadelphia Dr Lauffinger! in Virginia, Rugel, Gray & Sullivant! and in Missouri & Illinois Engelm! on Cephalanthus, Laurus Benzoin, Cornus, Alnus, Ostrya, Salix ~~Fraxinus~~, Bignonia, Vitis, (Smilax and Rhus Toxic.) ~~also~~ more seldom on herbaceous plants, Polygonum, Eupatorium, Aster. August to Septemb. — ~~Flowers white~~ Stems thick, greenish white, glomerules of flowers often very dense, forming ~~in β. turning brown~~ greenish white; masses of flowers several inches long and ~~6 or 8~~ ~~one~~ sometimes inch thick; ~~flowers white~~ flower whitish, in β. generally turning brown in drying; ~~the~~ much longer exserted in α and giving the ~~ripe~~ grown capsule a pointed appearance, which is very striking.

14. L. glomerata (Choisy under Cuscuta): stem threadlike (evanescent); flowers 5-parted, closely sessile, densely glomerate, forming long thick ropelike coils; sepals membranaceous ovate or ovate lanceolate, obtuse, crenate, with squarrose reflexed tips, imbricate, surrounded by 5 to 10 similar (the exterior being smaller) bracts; tube of the corolla cylindrical or a little wider above than below somewhat exserted twice as long as the oblong obtuse spreading or reflexed lobes; stamens as long as the limb; scales pinnatifidly laciniate, convergent, united at base; styles slender much longer than the ovary with the stylopodium; stylopodium nearly the size of the ovary proper or larger; capsule nearly globose, pointed, ~~mostly~~ 1 — 2 seeded. — ~~Cuscuta glomerata~~ Choisy. Cusc. p. 184 t. 4. f. 1. DC. prod. 9. p. 458. Lepidanche Compositarum Engelm! Sillim Journ 43 p. 343. t. 6 f. 30 — 35.

Wet prairies, Indiana, Dr Clapp! to Illinois & Missouri Drummond (Riehl! Engelm!) Mostly on Compositae, Solidago

S. Ophion, Helianthus, Vernonia; in Mr Richl's nursery it was very destructive to young pear trees. August & September.

I summer the numerous orange red stems of this curious species appears, sometimes over whole patches in low prairies, so that they can be distinguished at a distance. Stems orange red, disappearing about the flowering time; that part only, which is closely appressed to the stem of the mother plant becomes flattened, swells out on both upper and lower edge in irregular lines or knots; soon the epidermis bursts there and the squarrose densely bracted flowerbuds make their appearance; they grow rapidly, so that soon all the glomerules merged in the thick (6–10 lines) ropelike coil of a white or pale straw coloured squarrose bracts & sepals, the flowers being almost hidden.

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Lepidanche tenuiflora (Cuscuta Cephalanthi Engelm.)
on Cephalanthus, Vernonia, Eupatorium, Polygonum, Lysimachia
Lycopus, Teucrium, Boehmeria, Aster, Cornus, Salix
& Sida Surrunus

St Louis, Beardstown,

The only variation was found on a large Polygonum, flowers a little larger, lobes of calyx larger, but not as large as the tube — ~~lobes~~ substaminal scales larger than usually.

Lepidanche cuspidata (Cuscuta cuspidata Engelm. in Boston Journ. N. Hist. 5, p.)
on Liatris, Ambrosia, Bradburia, Tephrosia
β. on Iva, Ambrosia, Pluchea
Texas, Prairies between the Brazos & Colorado & in the Colorado Bottom lands
two varieties vide R. Lindheimer,

Lepidanche arvensis (Cuscuta arvensis Beyrich ined!)
Cuscuta pentagona Engelm) Cuscuta globularis Nutt in
Hb. Acad Phil) & monanda?) Hb Gray & Hb Shuttleworth)
α. pentagona on Tragia (?) (Virginia) Engel on Aster, Ambrosia, Triflolium pra.
Erigeron canad & strigos — Bignonia, Plantago
Polygonum Sonchus Passiflora Lepidium. (N. Carolina
Curtis, ~~Beyrich~~ Carolina Beyrich Hab. Berlin; Bosc. Herb. Neufchatel) — Florida Engel in Hall Shuttleworth — on Pteroraulona
Chrysopsis & gramineae

β. microcaly α On Ceanothus, Malva, Aster, Solidago, & Tenuisia
Euphorbia, Helianthemum ~~& Pteris aquilina~~
and Gramineae (on Pteris aquilina & Equisetum hyemale it did not root though it twined round it but the papillae do not enter the epidermis — but such were the case on some gramineae)
Beardstown Ill.
γ. calycina On Boltonia diffusa & Solidago
April to June, Prairies west of Houston. Texas
this possibly also = Georgia (Boykin) fragmentary specimen

5379

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2

1. Lepidanche chlorovarpa (Cuscuta Polygonorum E.) on Polygonum, Anthemis, Lycopus, Aster, Cephalanthus, Bidens (~~[illegible] (no impression)~~) Ambrosia, Gnaphalium (slight impression) — Analypha

St Louis, ~~N~~ Pem Illin, also Drummond — Hb. Shuttleworth

Lepidanche glandulosa ~~Florida~~ on Polygonum

Florida (Nuttl & Hb Shuttlew.) and Louisiana (Tainturier Hb Acad Phil)

Lepidanche umbellata ? (Hanrob. sub Cuscut.) Torrey ! — Lyc. N.Y.) — base of the Rocky Mts about the Canadian River ? (~~Lake~~ James — Hb. Torrey)

Lepidanche vermrosa (Cuscuta vermrosa E.)

Texas (Drummond III, 247; Lindheim I. 127.) on Petalostemon. —

β. near Brazos Texas (Lindheim III. . . .) on Gaura etc vide MSS. Trugia

Lepidanche californica (C. calif. Choisy)

Upper California, on Eriogonum (Nutt. Hb. Ac Phil) sat Dunbar

Lepidanche Gronovii (C. Gronovii W. Chois. C. vulgaris E. C. americana accrt). —

Cephalanthus, Rhus tox. Polygonum, Sambucus, Amphicarpa, Bignonia, Rubus, Lonicera, Berg. Cornus, Vitis, Eupatorium, Aster, Bidens, Solidago

Sambucus & vernonia Beardstown Geyer

Polygonum Kentucky, Short

Philadelphia Zantzinger, Lea

Ohio Frank on Hydrangea

Jacobson New York, Gray

Georgia ~~Hb.~~ Cary

North Carolina Gray on Polygonum etc, Buckley

~~Alabama~~

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3

Lepidanche Gronovii continued.

var. calyptrata — styles filiformi-bacca, dorsum elongatus — Alabama, Buckley on Aster Salix

also in Texas Drummond Hb Hook; Lindheimer on Hounty bir Colorado.

Carpinus, Polygonum (on Rhus toxic) Cephalanthus, Bignonia (styles very long) Rochmeria, Rhus tox. Solidago Cissus

var. minor. Georgia Boykin, on Solidago, New Hampshire J. Carey — Vermont on Lees in J. Carey — Salem. mass (Hb. Acad Ph). — Solidago Boston (Hb Ac Ph)

= C. canescens Mutt. Hb. Acad Phil.

Gronov: Willd. herb. 3160

var tetra merus on Ulmus Connecticut J. Carey

Lepidanche patens (Curc. Saururi Eigler, probably only a variet of L. Gronovii

Lt Louis on Saururus, Polygonum, Penthorum, Cephalanthus, Aster, Vernonia, Gramineae (without penetrating the Epidermis) Salix, Eupator, Aralyphe, Hibiscus Rhus tox

Western New York on Saururus (A Gray)

Kentucky (Short)

var minor N. Carolina: Curtis

Lepidanche restrata for the Mountains of western Virginia to North & South Carolina

Ulmus Aster, Solidago Eupatorium, S. Gilmanii Angel Buckley Gray & Sullivant — Curtis

Lepidanche compacta

α. coronata (Curc. coronata Degrish ~~in Hb Hamilto~~ Berlin)

Georgia Degrish — North Carolina Curtis Gray & Sullivant on Cornus restrata Andromeda ericoides; Alabama Gates — hb. Gray on Prunus glabra

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4/

Lepidanche compacta

β. adpressa (Lepid. adpressa Engl.

St Louis on Rhus toxic, Cephalanthus Cornus

Polygonum Fraxinus, Laurus Benzoin, Vitis

Eupatorium Bignonia

hills on the Kennimaw on Salix, Cornus, Alnus

Philadelphia (Dr Langenge) – Portsmouth Virginia

Rugel in herb. Shuttleworth

Western Virginia on Aster, Smilax, Ohya?

A Gray & Sullivant

Lepidanche glomerata (Carpoti glom. Thois.

Lepid. compositum Engl.)

Vernonia Solidago Silphium Helianthus (young

plantations in the nursery)

Madison, Illinois & Indiana

Lepidanche ~~[illegible]~~ ~~venulata~~ (Carpoti Carpli E, C. ambrosa

Dengrich in Herb. Berlin (not Hook flor bor. amer.?)

Carpo pauciflora Nutt in the Trans. Phil. Soc.

St Louis on Corylus Carya, Salix

Aster oblongifol. Rhus tox. Desmodium Verbena, Teucrium

Eupatorium Aster Solidago

Beaudstown on Solidago (Geyer)

Western Virginia – mountains near the warm Springs

on Ceanothus Helianthus

Georgia Dengrich in Herb. Berlin

Cult on Euphorbia, Chrysanth indicum, Aster sericeus

Gramineae (actually rooting) Abutilon, Verbena

Portulaca

Lepidanche porphyrostigma

α. hispidula Houston Texas, on Solidago, Aralia

Evolvulus, Mimosa – low shrub

Neubraunfels April, Gaura, Mimoseae (principally)

Gaillardia, Dalea, Commelyna – Rhus –

on Dry prairies, April.

β. neuropetala Illinois in dry swamps near Kaskaskia

on Compositae.

Florida Rugel in herb Shuttleworth on Compositae & Helianthemum

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